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An
Inaugural Dissertation
on
Poison from Opium.

By E. Davis Weston,

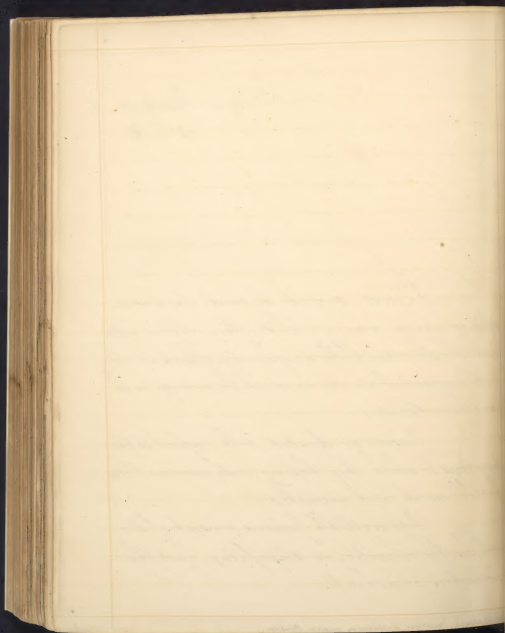
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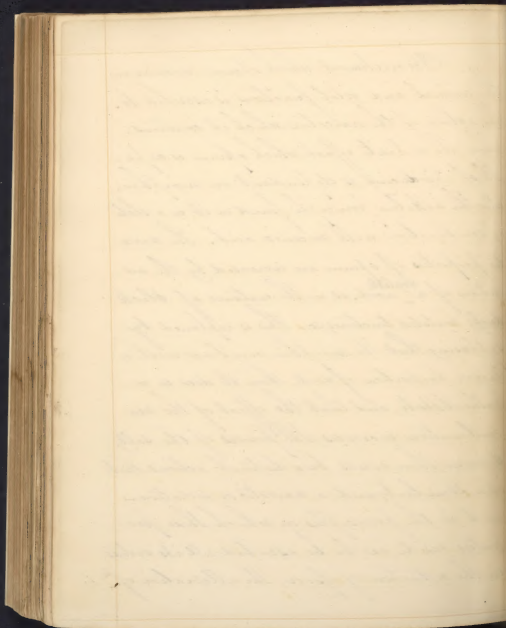
Poison may be defined that substance which when applied externally or taken into the human body uniformly effects such a derangement in the animal economy as to produce disease.

Poisons are divided, with respect to the kingdoms to which they belong, into mineral, vegetable, aerial, and animal.

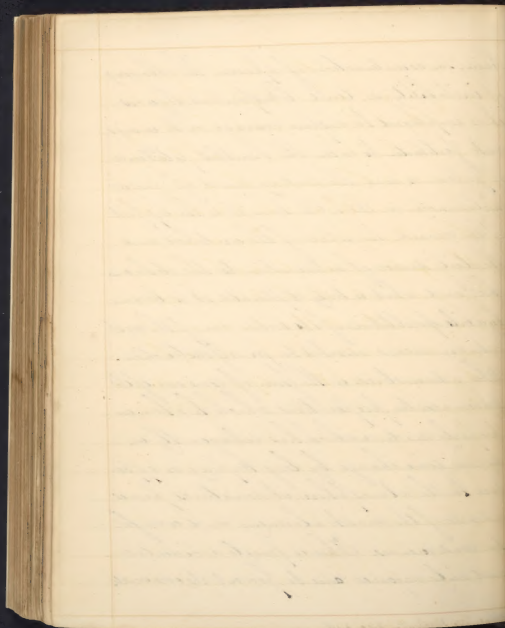
The vegetable poisons consist of two classes, the narcotic or stupefying, and the irritant or stimulant.



The excitement which opium produces on the animal and vital functions is ascribed to the action of the narcotins which it contains; while the opposite effect, which opium is capable of producing, is dependant on morphia; another alkaline principle found in it, in a state of combination with meconic acid. The narcotic properties of opium are increased by the addition of a ^{vegetable} acid, as in the instance of black drop, acetated tincture, &c. This is explained by supposing that the morphia combines with a larger proportion of acid, than it does in a natural state, and that the effect of the new combination increases the powers of the salt. Opium, then, exerts two distinct actions, that of a stimulant, and a narcotic or sedative; and to the principles, in which these properties reside, are to be ascribed, all its virtues in the reduction of fever, the alleviation of

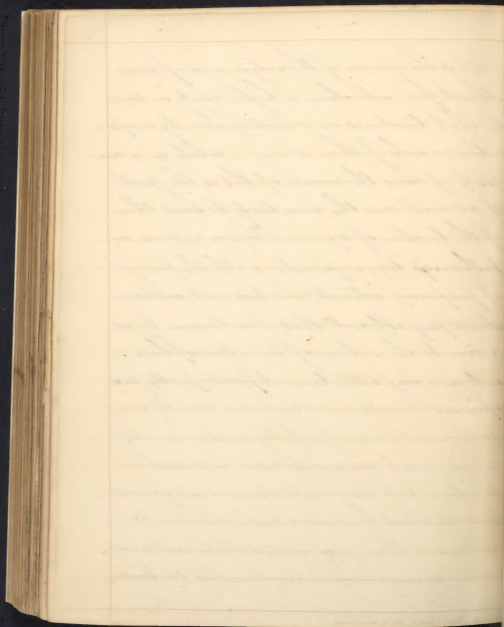


pain, the constriction of spasm, the allaying
of irritability, &c. And like spiritous liquors
it is employed to inspire courage, or to invigo-
rate fortitude - to calm the troubled passions
of grief - or near the sinking mind of senile
melancholy - in short, like them, it is the support
of the coward, the solace of the wretched, and
the daily source of intemperance, to the debauch-
ed; and what is truly deplorable, it is become,
by a vile prostitution of its virtues, one of the most
ordinary means resorted to for self destruction.
When administered in the form of some one of its
pharmaceutic preparations which has been un-
properly made, or which has subsequently un-
dergone some change by long keeping, or ex-
posure to the atmosphere, it sometimes proves
a source of the most alarming and even fatal
consequences. This is purely accidental,
and only requires care to prevent its occurrence.



It is the opinion of the vulgar, and of some
others, I fear, who claim a higher rank in society,
that tinctures, on standing, lose by evapo-
ration much of their strength; while in a ma-
jority of cases, the reverse of this is the fact.
* of no article can this more truly be said than
of the tincture of opium. There is not an ap-
othecary's boy, acquainted with the process
of preparing extracts, who does not under-
stand perfectly well that laudanum, by ex-
posure to the action of the atmosphere,
will, in a very little time, deposit pretty pure
opium. Laudanum which has been kept ex-
posed until it has partially undergone this
change, is very commonly used in domestic
practice; but the most serious consequences
have resulted from its administration to
children. In proof of this statement, and
as an example of many cases of the kind,

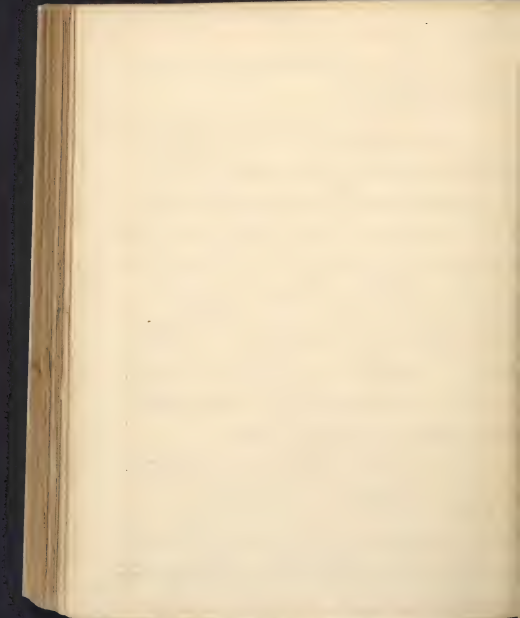
* Proof: Cope's M. S. Lectures.



we have selected the following recorded by
J. J. P. Physick.

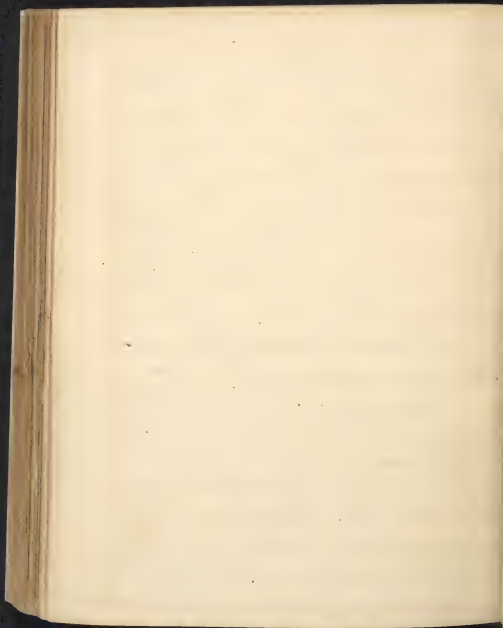
"On Thursday 6th June 1819 I was
sent for 'says the doctor,' in much haste at
9 o'clock in the evening to visit two children
of Mr. S. B., each three months old. They
were twins and had been affected with whoop-
ing cough for several weeks. The mother in-
formed me that in consequence of their
children having been very restless the night
before, she had given them some lutan-
um. To William she had given one drop
at seven o'clock, and the same dose to Ed-
mund forty minutes afterwards.

"I found William in a state of
stupor or very profound sleep, from which
he could not be roused, and was informed
that just before my arrival his whole body
had been convulsed; his breathing was labo-



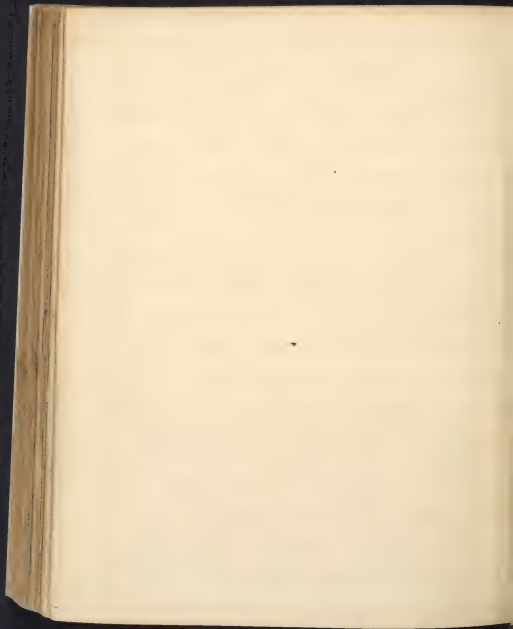
went out his little field and then Dr. in-
quired I found that he cut out of which the
conclusion had been given had contained
over 100 lbs. of the nearly pure opium
that medicine but having been left with
out a coat, it had dried away so much that
one drop only could be obtained for William;
in order to procure another drop, two drops
of water had been put into the vessel and stirred
about, by which another drop had been ob-
tained and given to Edmund, forty minutes
having intervened between the two doses."

By referring to the history of these cases
related in the 8. Volume of the Eclectic Me-
dical, Gazette, it will be found that the
symptomatic effects produced in both cases
were precisely alike. Their terminations how-
ever were dissimilar. William sunk under
the influence of the poison although he

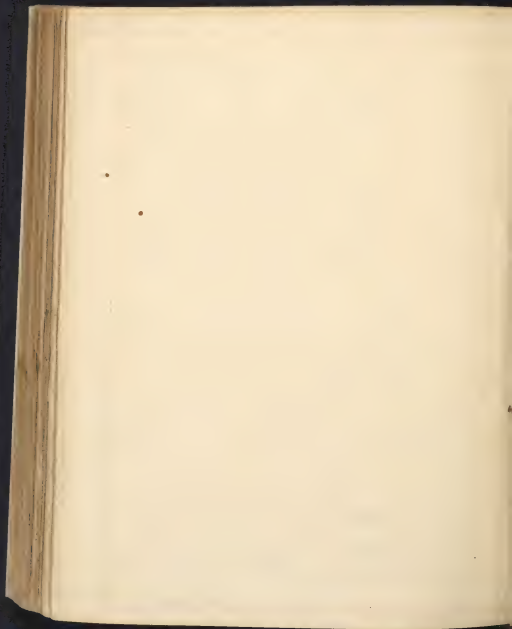


noticed it in a distance it could not and
an intention to see it. I cannot in-
dubitably remember but it was with the greatest
difficulty after running for nearly an hour,
chance of meeting the old of his life see

Occasionally the same recently
noticed from the shots, produced the
same unpleasant and fatal effect as that
which we have already noticed. This is owing
to its an entirely of course which may be air-
ly ascribed to its having been drawn from
droes; or not having been filtered as to its
nature of this kind contains, it is more than
probable, from the intimate mixture of obtain
a portion of undissolved and suspended par-
ticles of that drug one or more of which, pe-
culiar, is to a fourth or fifth of a grain
most easily taken out with a drop and
and in a few drops or, rather to be obtained



and in the morning he was found dead
in bed. The effect of the poison was
so rapid that he died before he could
be attended by a physician. He stated that
about two weeks ago he was going to
visit a child who was taken ill very
suddenly. On his arrival he found it lying
under the usual symptoms of poison - and
on inquiry he ascertained that the nurse, having
the innocent milk pangs of the child, had given
it three drops of Laudanum. & as the dose
was correctly administered he supposed it
must be the effect of the poison. That the
preparation must have been in pure and
accordingly he ascertained the fact visited the
druggist of whom the article had been
purchased but a few hours before. The

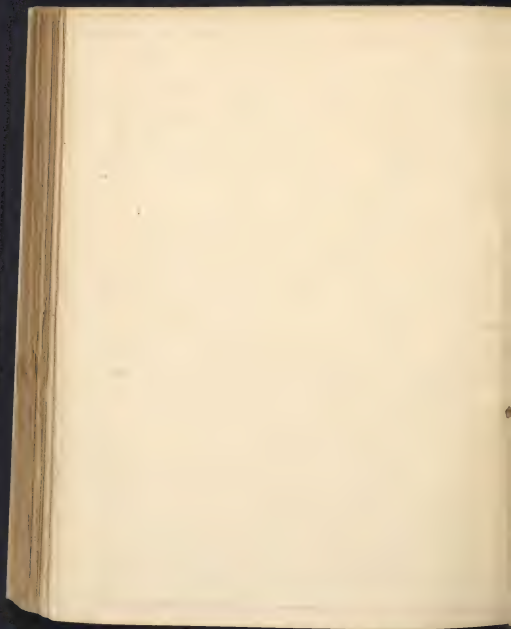


druggist can readily ascertain that
the action of laudanum has been obtained
by a combination from the bottle, in which he
prepared it, and which, as remarked to him,
was very soluble. Contained very probably a half
a pound of opium liquor.

We have reason to believe from
some experiments which we made on laudanum
that the alterations which take place soon after
not owing solely to a combination of the men-
struum, but in part to some, as yet unex-
plained chemical change which takes place as
among the different proximate principles
which enter into its constitution.

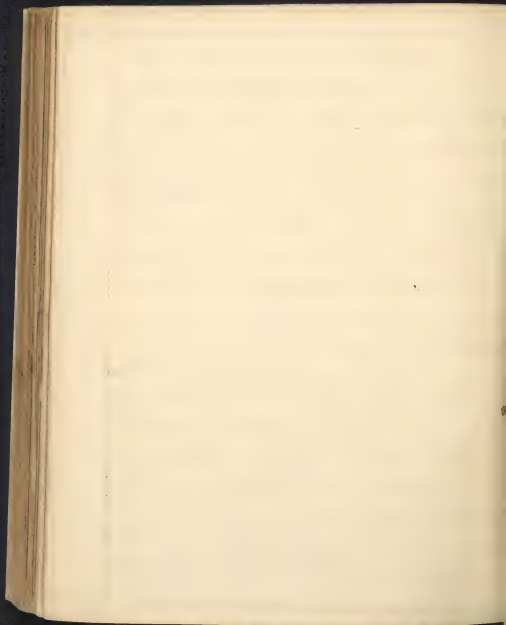
Having made the foregoing notice
of the laudanum we next thought it fit
to mention what we consider to be a mode of preparing

The medicinal effects of an ounce of
laudanum on the system may be the base of an arti-



have one, which steals over our senses as the
morning breeze, follows so rapidly, that he shivers
without effect. He is off nearly if not altogether
unobserved. The patient grows thin, & all his
double senses with vertigo, & misapprehension,
and an irresistible inclination to sleep. These
symptoms are soon succeeded by a slow, full, &
thorough shudder, & enormous heat, & a morbid
excitation of the vessels, & a violent commo-
tion. *Cama laqueo* *laqueo*, *laqueo*, *laqueo*,
paralysis, & finally death.

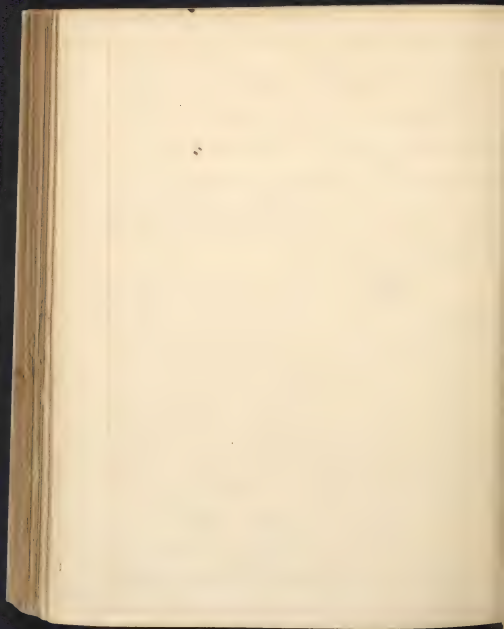
The young and nervous paralytics
might be mistaken for the violent kind of
paralysis to be confounded this with idiocy, &
it is true a so sleep. It is nevertheless of im-
portance as the treatment is different
to be able to draw a line of distinction be-
tween them. In a word the limbs are motionless
and the face is flushed, whilst in this disease



which has been written must not exist
in memory. The reverse obtains in respect
to the mouth and the face is white. With
the exception of these the diagnoses are few
and doubtful. Indeed in some cases it will be
found almost impossible to decide on the any
basis of observation and if recourse can be had
to the history of the case.

Subiculation with which it might
possibly be confounded is readily distinguish-
ed by the flapping of the outer lip its sen-
sibility to the impression of cold water and
the continuation of the breath the quiver
more so. It is of very little practical import
whether here be distinguished or not so that
the treatment be directed with a view to the
alleviation of the more serious affection.

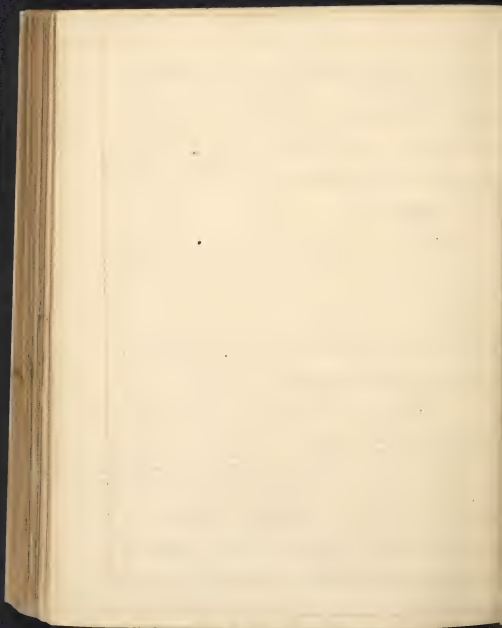
The nature of the recovery will
depend on the state whether liquid or solid of



In opinion taken, as well as the quantity of it;
the length of time it has remained in the
stomach; the state of that viscus when it
was received into it; the powers of the system
to absorb its influence; and the violence
of the excitement.

If the patient does not improve
in a short time, it is justifiable to think
that he ought to undergo a trial of the
unpleasant but the necessary means used to
relieve him, by the intervention of surgical as-
sistance, all danger may be removed.

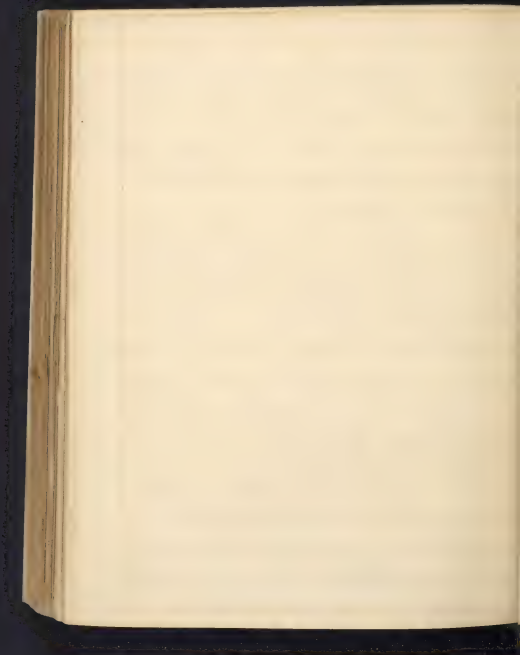
But on the contrary, should the
power of deglutition be lost, the sensibility of
the stomach be the action of nerves destroyed,
and at the same time should the stomach
be loaded with imperfectly digested aliment,
attended ^{ing} with the operation of "pumping," or
vomiting, although not impracticable; or if



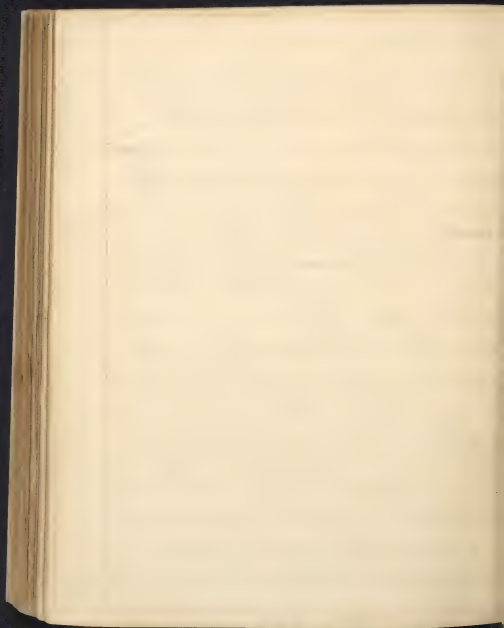
in the case of a patient who has been
affected with this disease it is not
uncommon to find the patient
in a state of great prostration
and sometimes the signs of the disease
are much increased.

To be able to treat this disease in
its various stages every practitioner should
be provided with a syringe and stomach
tube. Of these there are several different
modifications. The common instrument will
answer every purpose of the more com-
plex and expensive. Indeed some are
used by surgeons for the greater simplicity of
their structure and operation.

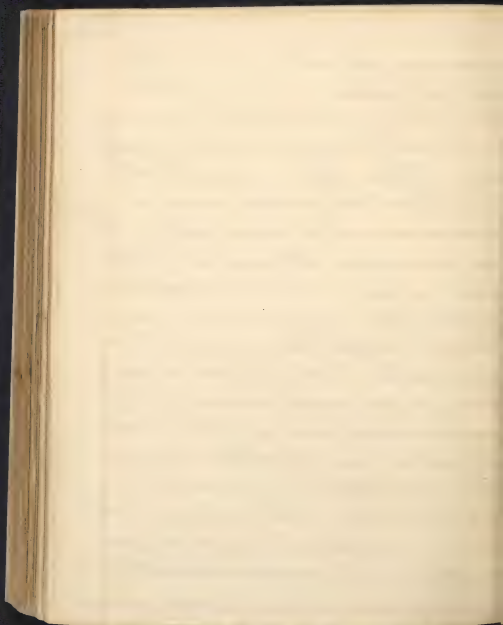
The first indication in the
treatment is to evacuate the stomach.
With this view an emetic should be adminis-
tered immediately and to ensure its speedy



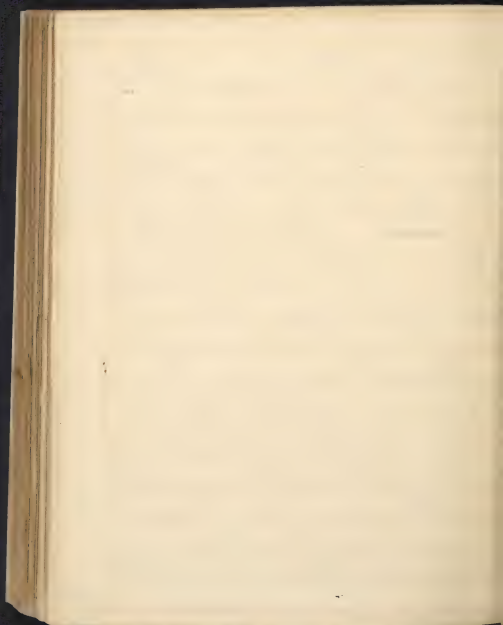
and put a union in substitution for the
want, if necessary, should be withheld.
It sometimes happens that the patient is in-
capable of swallowing; in such cases it is ad-
vised to inject emetics into the stomach by
means of the tube. This practice appears ob-
jectionable so far as it relates to those cases in which
the power of the larynx has been destroyed by
the poison. Is it probable that the stomach
will be influenced by emetics however intro-
duced when through sympathy by reflexion
primarily made when the whole muscular
power of the throat is destroyed? Emetics are
only properly relied on in the early stage - be-
fore the poison has operated seriously on
the nervous system. Of those such should
be selected for administration as are known
to combine with the most decided certainty
and activity. Lefthand of Lane by common



constant as a single article it allowed to test
its these properties in an eminent degree.
It may be administered alone or in combi-
nation with Ipecacuanha or Turbith of anti-
mony. Professor Chapman is of the opinion
that the most active & certain remedy we
possess as an emetic, is a combination of the
two latter articles. To ensure their operation
emetics are given in immense doses, even dou-
ble that of the ordinary amount. To promote
their action Professor Cox recommends the use
of mustard. In the slab of a powder, in doses
of one or two drachms full, this article of itself
is said to be highly emetic as such are domes-
tic practice it is greatly extolled. As an aux-
iliary means stimulation of the fauces should
not be neglected. In the early stage it will
sometimes excite vomiting independently of
any other means. I mention, the emetic

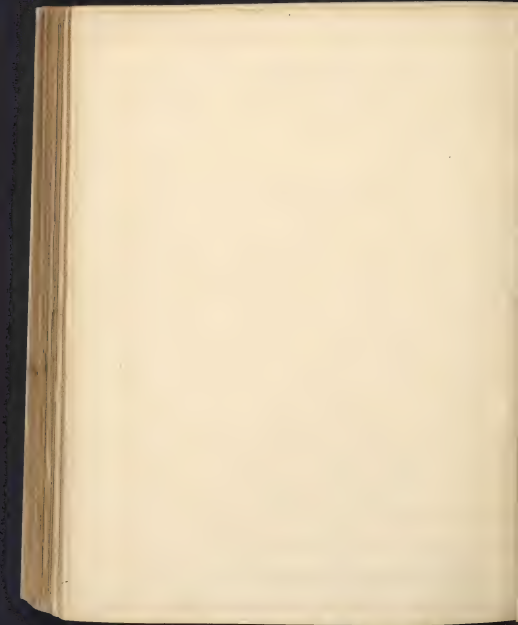


The dashes of tepid water over the body, &
a variety of remedies calculated to arouse the
system, may be resorted to when the
motus fails to operate from a want of
the irritability of the stomach. But
when there is great toror in the stomach
neither emetics nor any other remedy will be
likely to excite vomiting. In certain cases how-
ever it may be necessary to have recourse to some
others. Dr. Thomas states that in certain
cases of poison by opium or such other con-
vulsed sedatives occasioning great toror in the
stomach so as to resist the effects of even
strong emetics introduced into that organ,
a scruple or half a drachm of turpentine an-
ticipating dissolved in a little water, and thrown
up in the intestines in form of a clyster,
has excited vomiting, and at the same time
partly reconciled the morbid action of the liver.



The idea of injecting small quantities
of tartaric acid into the circulation
often as a service resort is advanced by the
same author.

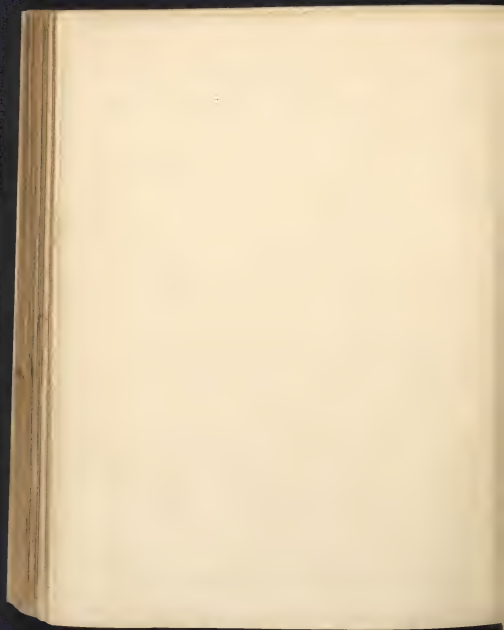
"A very singular case says he is re-
lated in the French 'Bibliothèque de Médecine'
among the 'Cas Rares' of a man about
40 years of age who swallowed a piece of meat which
stuck in the oesophagus, near the lower end of
the tube. Alarming symptoms followed
quickly, but the surgeon could not dislodge
the foreign body. He opened the median vein
in the arm, and injected four grains of tar-
tarated antimony dissolved in an ounce of
water. About a minute afterwards the
patient vomited the piece of meat. Query.
Might not the same plan be adapted with
advantage in cases of poison from opium
and other powerful narcotics, where the



patient is deprived of sensibility, or the power of swallowing, or where there prevails very great torpidity of the stomach?.

But we would not attempt any such means, or evacuating the stomach, or the man as a dernier resort.

As we have already observed, it would be improper to rely on emetics when the disease has seriously affected the nervous system. Their operation at best under such circumstances would be very questionable, this of itself becomes a serious objection to their use when we have it in our power to evacuate the stomach very efficiently and directly by mechanical means, as the delay of a few minutes might prove very injurious or even fatal to the patient. But if the patient be in an apathetic state, and particularly if he be of a phlegmatic habit should



in the blood, in effect it causes the
arterial vessels to contract by increasing
the volume of the blood in the heart.

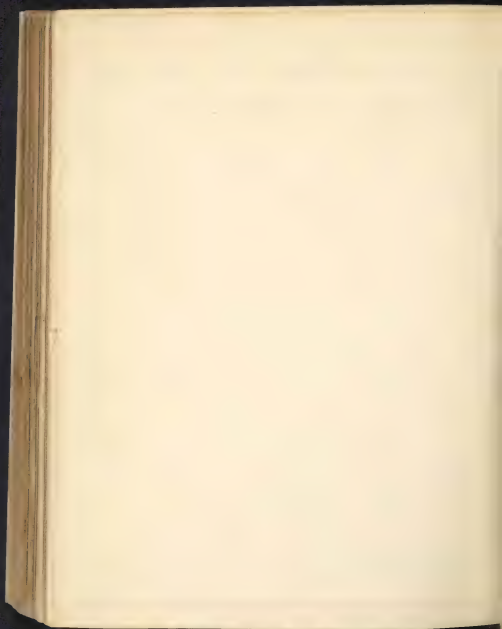
It may be observed as a general
rule that when emetics fail to operate
by the force of depletion it is in the
subject it is in a state of insensibility
or when he is a vesicative, we should re-
fuse at once to the evacuation of the stom-
ach the mechanical means, the Emetics
which consists in passing a gum elastic
tube into the stomach and by means of a
syringe injecting a small quantity of
water, which mixing with the contents of
the stomach should be mingled with a le-
mon juice and a fresh supply admin-
istered. By this alternate injection and evac-
uation the stomach may be a very little time
completely washed out. The necessity
of continuing the operation, and consequently



how it should be just suited will readily
assist itself to the intelligent operator.

We know that the accident which
has occurred is one of the highest nature
the operation the business of the world
is that which is the most common. Some-
times though rarely under this accident
believed; and when it does I will be sure
can be more recourse to some other means
of correction. But the fact is the presence
of such a kind of fault in the system for
a long time under the full influence of the
law & the law as it continues to do in this
operation is not absolutely inexcusable.

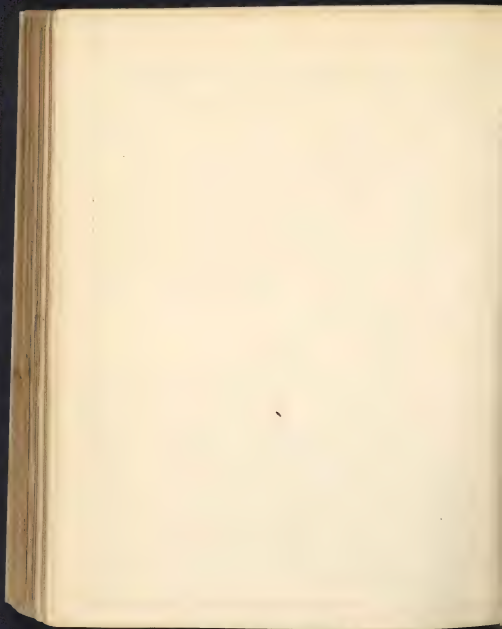
That part of the system which
exists in a form in which it is not
impossible in the off of a more perfect manner always
to be a more perfect manner of the system
is a more perfect manner of the part of the
system. This may be more or less



the rest of the entire power of the left hand
in the right hand and the same of the
right is thrown forward, the hand on the right
hand under the left and over into an over position
now position in the same and the same.

It is true that we meet with this difficult-
ty in passing the tube through the neck - this
is the lastest another advantage which should
be mentioned in connection - that is to say the
tube which might otherwise be injured by the
patient's teeth.

It is true the patient should be kept in a
state of 'toror', the patient should be kept in a
state of 'toror' in motion on his feet if he be able
to stand, and if not by frequent shaking
and moving his body. Trachea should be
unswerving to hold it on the surface by
fish bones or the hands with muscles of
sola or other stimulants a (the same) Bri-
tant to the ichneumonid tubercle - shaking



just water over the salient case now & then
& above all the information of such cases
in the stomachs and of the situation of the
stomach.

With a view to counteract the effects
of the poison it was at one time a common
practice to administer large quantities
of the vegetable acids even without respect
to the presence or absence of the stomach; but
the practice is now entirely exploded for reasons
which must be obvious from what we have
already said with respect to morphia. But
even the administration of the acids in the ad-
ministration of acids. Even in cases of
these in cases where the poison has not
passed its full influence will be found to
answer very well but to relieve those who
in the treatment of the poison a dose of
opium & laudanum would be dangerous in the
extreme.



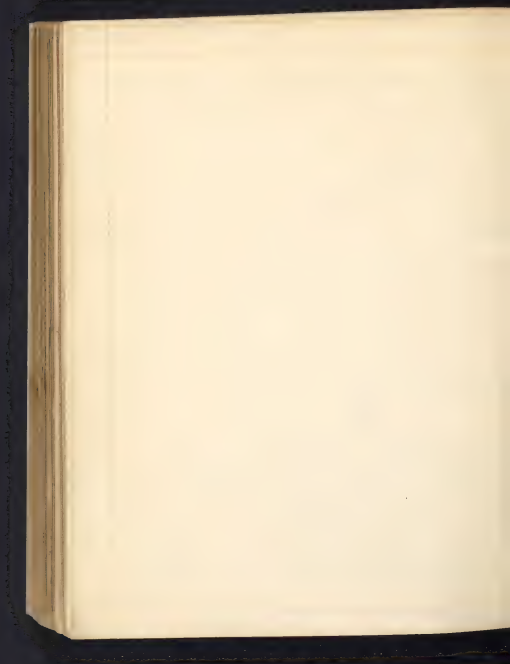
Resection although most generally
attributed to the state of the tissue should be
nevertheless very carefully considered. The debility
which is attendant on the operation of re-
section, increased as it undoubtedly
would be if the nervous system was not
of such a kind as to place the subject in a
very dangerous situation. We do not wish
to understand that we are aware of blood-
letting in all cases; in the majority we are
satisfied it will be a measure of the
highest utility. It is in cases of the kind
such as hemorrhoids, etc. that it is of
great use. This stage generally comes on after
the blood has been in the stomach some-
time, and it is to be met by active depletion
from the arm, or if the symptoms be more
urgent from the intestinal canal. The mea-
sures to be employed are to be
determined by the particular circumstances





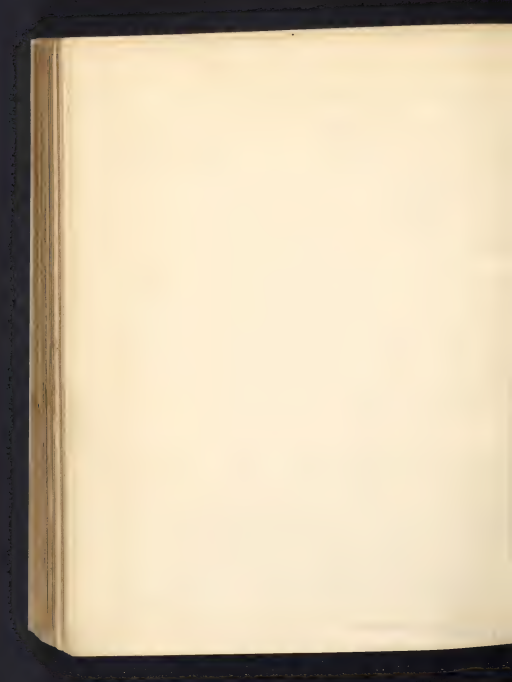
was then as being absolutely necessary in some
cases for the preservation of the patient and
in others that the best chance of the want
of success in many cases which have otherwise
been used. It is true that the patient is not a
significance of this fact as a result of, or an
attention to it. Some more or less violent cases
might be added in view of the truth of
this statement, but as we have already have
added the time to which we refer, which we need not
need to be so far our remarks are sufficient
in a case related in Dr. Garrison's work, so it
be true must suffice.

A young lady, however, in
the same location of mind, was in a
marriage of her own. The attendance of
her family, & Dr. P., were ^{called} immediately.
Time enough had elapsed however, before they
arrived, for the reason that the patient was
over, & they proceeded at once to the relief of the



and the mother. The patient has the
same pain, and she is very much
much relieved. She is very much
at her feelings as being put to rest. In a
word the physician thought her so far
with her could with her and her
latter for a few minutes, then did so. But
says Dr. P. to her returning in her
in her afternoon, by the way she is
much better, we found our patient
under the most alarming state of delirium
and a fever, which, in her condition
our efforts is to remove, she is, I think.

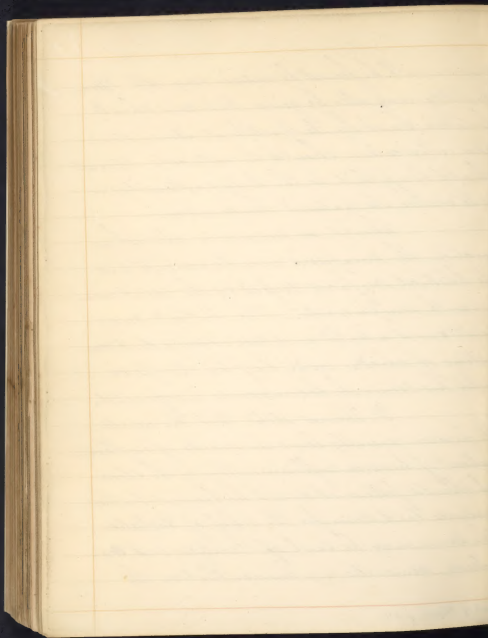
The treatment which it would be
proper to administer in these cases is
generally a small dose of
the most powerful and the most
the most powerful of the most
the most powerful of the most
the most powerful of the most



regime will be found to answer very well. Brandy toddy may also be given but care should be taken least by its too liberal administration intoxication should be induced. Warmth should be applied to the body & extremities so as to restore its natural temperature.

Should we succeed in establishing reaction the sinapisms may be removed and the blistered surfaces dressed in the usual manner with simple ointment. The patient may be allowed a light and nourishing diet, consisting of chicken water, beef tea, soups &c. until his stomach becomes more invigorated.

Dr. Thomas states that "the vegetable poisons usually leave no marks of inflammation;" if however inflammation of the stomach should follow it must be treated by those measures laid down for the relief of Pustules. The same may be said of Paralysis and Convulsion, remembering however that in the



selection of this those antispasmodics should
be selected for administration which do not
combine with their ordinary properties that
of a narcotic; for such might probably prove
very injurious.

